PROPERTY PLANNING COMMON ELEMENTS

COMPONENTS OF MASTER PLANS

HABITATS AND THEIR MANAGEMENT

Clearcut

Description

Clearcut is an even-aged method used to regenerate a stand by removing most or all woody vegetation during harvest and creating a completely open area, leading to the establishment of an even-aged stand. Regeneration can be from natural seed produced by adjacent stands or from trees cut in the harvest operation. Regeneration is established during or following stand removal. Clearcuts are also used prior to direct seeding or replanting for artificial regeneration systems.

Characteristics

- Even-aged
- Seed origin
- Used for shade-intolerant and exposure-tolerant species
- New stand regenerates after the existing stand is harvested
- Best adapted for species that reproduce naturally after major disturbance

Variations

- **Uniform clearcut:** The entire stand is removed in one cut. Designed to regenerate the entire stand at the same time.
- **Alternate clearcut (strip or patch):** The stand is removed in two cuttings occurring at separated periods in time. Generally, half the stand acreage is removed in each cutting. The uncut area serves as a seed source. Stand removal is completed within a period of time not exceeding 20% of intended rotation. Cutting may be in a patchwork pattern on in designated strips. The clearcut areas are best oriented to be at right angles to the direction of seed-dispersing winds.
- **Progressive clearcut (strip or patch):** The stand is removed as in the alternate clearcut method, above, except that a series of strips or patches are harvested over three or more entries, usually covering an equal area on each entry. The stand is removed over a period of time not exceeding 20% of intended rotation. In higher water table areas, this method may be chosen to reduce water fluctuations and reduce windthrow. In steeply sloping areas, this method may reduce erosion and windthrow.

Considerations

General considerations in the application of the clearcut method are:

- Seeding characteristics of desired species – maturation, viability, dispersal, germination, good seed crop

- Site capability
- Seed/seedling needs for establishment and survival
- Site preparation
- Existing and potential competition

Advantages

- Local, known seed source adapted to the site
- Efficiency of harvesting operations
- No preparatory harvest necessary
- Maintenance of shade-intolerant species in the landscape
- Complete overstory removal can result in dense stocking and vigorous regeneration and growth for many species
- Logistically easier to treat the site to control undesirable vegetation
- Longer time period between entries reduces some vehicle impacts to soils

Disadvantages

- Timing relative to good seed years is difficult
- Coppice regeneration of unwanted species may dominate the site
- Dispersal, density, and spacing pattern of desirable seed may be unsatisfactory
- Overexposure may cause seedling failure
- If regeneration is unsuccessful, seed source can be lost in uniform clearcut
- May require non-commercial cutting and extensive site preparation
- On wet sites, can potentially result in water table changes
- Higher windthrow potential (strips, patches, adjacent stand)